

1. An encrypted television signal, comprising:  
a plurality of encrypted samples of the television program, the samples being encrypted under a first encryption method; and  
an unencrypted portion.
2. The encrypted television signal according to claim 1, wherein the television signal is a digital television signal, and wherein the encrypted samples comprise encrypted packets, and the unencrypted portion comprises unencrypted packets.
3. The encrypted television signal according to claim 2, wherein the digital television signal complies with an MPEG standard, and wherein the encrypted packets are identified by a packet identifier.
4. The encrypted television signal according to claim 2, wherein the digital television signal complies with an MPEG standard, and wherein the unencrypted packets are identified by a first packet identifier, and wherein the encrypted packets are identified by the first packet identifier.
5. The encrypted television signal according to claim 2, wherein the digital television signal complies with an MPEG standard, and wherein the unencrypted packets are identified by a first packet identifier, and wherein the encrypted packets are identified by a second packet identifier.

1       6.     An encrypted television program, comprising:  
2             a plurality of unencrypted packets; and  
3             a plurality of encrypted packets, wherein both the unencrypted and the  
4     encrypted packets are required to decode the television program.  
5

6       7.     The encrypted television program according to claim 6, wherein the  
7     unencrypted packets and encrypted packets comprise transport stream packets.  
8

9       8.     The encrypted television program according to claim 6, wherein the digital  
10    television signal complies with an MPEG standard, and wherein the encrypted and  
11    unencrypted packets are identified by a packet identifier.  
12

13    9.     The encrypted television program according to claim 6, wherein the digital  
14    television signal complies with an MPEG standard, and wherein the unencrypted  
15    packets are identified by a primary packet identifier, and wherein the encrypted  
16    packets are identified by a secondary packet identifier.  
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1 10. A method of encrypting content, comprising:  
2 identifying a portion of the content to encrypt according to a selection  
3 algorithm where less than 100% of the content is encrypted;  
4 encrypting the identified content portion according to a first encryption  
5 method to produce a first encrypted content portion;  
6 encrypting the identified content according to a second encryption method  
7 to produce a second encrypted content portion; and  
8 combining an unencrypted content portion along with the first and second  
9 encrypted content portions to produce partially dual encrypted content.

10  
11 11. The method according to claim 10, further comprising combining the content  
12 portion with the first and second encrypted content portions to produce dual  
13 partially encrypted content.

14  
15 12. The method according to claim 10, further comprising distributing the  
16 unencrypted content portion along with the first and second encrypted content  
17 portions.

18  
19 13. The method according to claim 10, wherein the content comprises a  
20 television signal and the partially dual encrypted content comprises a partially dual  
21 encrypted television signal.

22  
23 14. The method according to claim 13, further comprising distributing the  
24 partially dual encrypted television signal over one of the following: a cable system,  
25 a terrestrial broadcast system, satellite system, and as packaged media.

26  
27 15. The method according to claim 13, wherein the television signal has an  
28 audio portion, a video portion and a system information portion.  
29

1 16. The method according to claim 15, wherein the selection algorithm  
2 comprises selecting system information for encrypting.

3  
4 17. The method according to claim 15, wherein the selection algorithm  
5 comprises selecting the audio portion for encrypting.

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7 18. The method according to claim 15, wherein the selection algorithm  
8 comprises selecting the video portion for encrypting.

9  
10 19. The method according to claim 10, wherein the content is comprised of  
11 multiple programs and wherein the selection algorithm comprises sequentially  
12 selecting each program for a period of time for encryption.

13  
14 20. The method according to claim 10, wherein the content is comprised of  
15 multiple programs and wherein the selection algorithm comprises selecting fewer  
16 than 100% of the programs for a period of time for encryption.

17  
18 21. The method according to claim 10, wherein the content is comprised of  
19 blocks of data and wherein the selection algorithm comprises selecting N blocks  
20 for every M<sup>th</sup> block of content for encryption, where N is less than M.

21  
22 22. The method according to claim 10, wherein the content is comprised of data  
23 structures and wherein the selection algorithm comprises selecting a fraction of the  
24 data structures for encrypting.

25  
26 23. The method according to claim 10, wherein the content is comprised of  
27 compressed data, wherein the algorithm comprises selection of data needed for  
28 decompressing the content for encrypting.

1 24. The method according to claim 10, wherein the content is comprised of a  
2 plurality of elementary streams, and wherein the algorithm comprises selecting  
3 header information for encrypting.  
4

5 25 The method according to claim 24, wherein the header information  
6 comprises at least one of packetized elementary stream (PES) header, sequence  
7 header, sequence header extension, and group of pictures (GOP) header.  
8

9 26. The method according to claim 10, wherein the content is packetized using  
10 a first packet identifier (PID), and the PID for packets containing content selected  
11 for encryption is mapped to a second PID.  
12

13 27. The method according to claim 10, further comprising distributing the  
14 unencrypted content portion separately from the first and second encrypted content  
15 portions.  
16

17 28. An electronic storage medium storing instructions which, when executed on  
18 a programmed processor, carry out the method of encrypting content according to  
19 claim 10.  
20

21 29. An electronic transmission medium carrying encrypted content encrypted by  
22 the method according to claim 10.

1 30. A method of encrypting content, comprising:  
2 encrypting content according to a first encryption method to produce a first  
3 encrypted content portion; and  
4 combining the first encrypted content portion with an unencrypted content  
5 portion to produce partially encrypted content.  
6

7 31. The method according to claim 30, wherein the partially encrypted content  
8 comprises a television signal.  
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10 32. The method according to claim 31, wherein the partially encrypted television  
11 signal is distributed over one of the following: a cable system, a terrestrial  
12 broadcast system, satellite system, and as packaged media.  
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1 33. A method of managing multiple access control systems within an audio  
2 visual content distribution system, comprising:

3 identifying a portion of the content to replicate for each of a plurality of  
4 access control systems according to a selection algorithm wherein less than 100%  
5 of the content is replicated; and

6 replicating the identified portion.

7  
8 34. The method according to claim 33, further comprising encrypting the  
9 replicated identified portion using a first encryption algorithm.

10  
11 35. The method according to claim 34, further comprising:

12 replicating the identified portion a second time to produce a second  
13 replicated portion; and

14 encrypting the second replicated portion using a second encryption  
15 algorithm.

16  
17 36. The method according to claim 35, further comprising combining the  
18 identified portion with the encrypted replicated portion and the encrypted second  
19 replicated portion to produce dual partially encrypted content.

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21 37. The method according to claim 36, wherein the dual partially encrypted  
22 content is distributed over one of the following: a cable system, a terrestrial  
23 broadcast system, satellite system, and as packaged media.

24  
25 38. The method according to claim 36, further comprising assigning a separated  
26 packet identifier to packets containing each of the identified content, the encrypted  
27 replicated identified portion and the encrypted second replicated portion.

28  
29 39. The method according to claim 33, wherein the content comprises television  
30 content.

1 40. A method of encoding a packetized digital television signal, comprising:  
2 encrypting a portion of the packets containing the digital television signal  
3 according to a first encryption algorithm;  
4 encrypting the portion of the packets containing the digital television signal  
5 according to a second encryption algorithm;  
6 leaving a portion of the packets containing the digital television signal  
7 unencrypted;  
8 assigning a primary packet identifier to the unencrypted packets;  
9 assigning a primary packet identifier to the packets encrypted under the first  
10 encryption algorithm; and  
11 assigning a secondary packet identifier to the packets encrypted under the  
12 second encryption algorithm.  
13

14 41. The method according to claim 40, further comprising generating information  
15 linking the digital television signal to the primary and secondary packet identifiers.  
16

17 42. The method according to claim 41, further comprising transmitting the  
18 information linking the digital television signal to the primary and secondary packet  
19 identifiers as program specific information (PSI).  
20

21 43. The method according to claim 40, further comprising transmitting the  
22 unencrypted packets along with the packets encrypted under the first and second  
23 encryption algorithms over one of the following: a cable system, a terrestrial  
24 broadcast system and satellite system.  
25



1 44. A packet selector and duplicator device, comprising:  
2 input means for receiving a stream of clear packets from a satellite  
3 descrambler;  
4 means for selecting a group of packets for dual encryption while leaving a  
5 remaining set of clear packets;  
6 means for duplicating the selected packets to provide a first and second set  
7 of duplicate packets;  
8 means for assigning a first packet identifier to the first set of duplicate  
9 packets and assigning a second packet identifier to the second set of duplicate  
10 packets;  
11 means for multiplexing the first set of duplicate packets and the second set  
12 of duplicate packets with the set of clear packets to produce an output stream of  
13 packets.  
14  
15 45. The apparatus according to claim 44, further comprising a first encrypter that  
16 encrypts the first set of duplicate packets and the set of clear packets under a first  
17 encryption algorithm.  
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19 46. The apparatus according to claim 44 further comprising a first encrypter that  
20 encrypts packets having the first packet identifier under a first encryption algorithm.  
21  
22 47. The apparatus according to claim 44, further comprising a second encrypter  
23 that encrypts the second set of duplicate packets under a second encryption  
24 algorithm.  
25  
26 48. The apparatus according to claim 47, wherein the stream of clear packets  
27 further comprises packets containing system information; and further comprising  
28 means for modifying the system information to identify the encryption used to  
29 encrypt the second set of duplicate packets.  
30

1 49. The apparatus according to claim 44, further comprising a second encrypter  
2 that encrypts packets having the second packet identifier under a second  
3 encryption algorithm.  
4

5 50. The apparatus according to claim 44, further comprising packet remapping  
6 means for remapping packet identifiers so that the first set of duplicate packets and  
7 the set of clear packets are assigned the same packet identifier.  
8

9 51. The apparatus according to claim 44, wherein the means for selecting a  
10 group of packets for dual encryption selects the packets by determining that the  
11 packet contains an elementary stream header.  
12

13 52. The apparatus according to claim 44, wherein the means for selecting a  
14 group of packets for dual encryption selects the packets according to a time  
15 dependent algorithm.  
16

17 53. The apparatus according to claim 44, wherein the means for selecting a  
18 group of packets for dual encryption selects the packets by determining that the  
19 packet contains audio information.  
20

21 54. The apparatus according to claim 44, wherein the means for selecting a  
22 group of packets for dual encryption selects the packets by determining that the  
23 packet contains video information.  
24

25 55. The apparatus according to claim 44, wherein the means for selecting a  
26 group of packets for dual encryption selects the packets by determining that the  
27 packet contains system information.  
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1 56. A packet identifier remapping apparatus, comprising:  
2 a demodulator that demodulates a stream of modulated packets, the stream  
3 of packets comprising clear packets with a first packet identifier, encrypted packets  
4 with a second packet identifier and packets with a third packet identifier; and  
5 a remapper that changes the packet identifiers so that the clear packets with  
6 the first packet identifier and the encrypted packets with the second packet  
7 identifier have the same packet identifier.  
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9 57. The apparatus according to claim 56, wherein the packets with the third  
10 packet identifier comprise clear packets and further comprising an encrypter for  
11 encrypting the packets having the third packet identifier under a different algorithm  
12 than that used to encrypt packets having the second packet identifier.  
13

14 58. The apparatus according to claim 56, wherein the packets with the third  
15 packet identifier comprise encrypted packets, and wherein the packets with the  
16 third packet identifier are encrypted under a different algorithm than that used to  
17 encrypt packets having the second packet identifier.  
18

19 59. The apparatus according to claim 56, wherein the stream of modulated  
20 packets are quadrature amplitude modulated; and wherein the demodulator  
21 comprises a quadrature amplitude modulation demodulator.  
22

23 60. The apparatus according to claim 56, further comprising a multiplexer that  
24 combines the remapped packets with the packets with the third packet identifier  
25 to produce an output data stream.  
26

27 61. The apparatus according to claim 60, further comprising a quadrature  
28 amplitude modulator that modulates the output data stream.  
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62. The apparatus according to claim 56, wherein the stream of modulated packets further comprises packets containing system information; and further comprising means for modifying the system information to identify the encryption used to encrypt the packets having the third packet identifier.

1 63. A method carried out at a television provider headend, comprising:  
2 receiving a feed of scrambled television content in the form of a stream of  
3 packets;  
4 descrambling the scrambled television content to produce a stream of clear  
5 packets;  
6 selecting a packet for dual encryption;  
7 duplicating the packet to provide first and second packets;  
8 re-mapping the first and second packets to first and second packet  
9 identifiers;  
10 encrypting the first packet under a first encryption algorithm to produce a first  
11 encrypted packet;  
12 encrypting the second packet under a second encryption algorithm to  
13 produce a second encrypted packet;  
14 re-mapping clear packets to the first packet identifier.  
15

16 64. The method according to claim 63, further comprising assembling a partially  
17 encrypted stream of packets by combining clear packets with the first packets and  
18 the second packets.  
19

20 65. The method according to claim 63, wherein the first and second packets are  
21 inserted adjacent one another in the partially encrypted stream of packets.  
22

23 66. The method according to claim 63, wherein the packets are selected for dual  
24 encryption based upon contents of the packet.  
25

26 67. The method according to claim 63, wherein the packets are selected for dual  
27 encryption based upon a timing sequence for sampling the stream of clear packets.